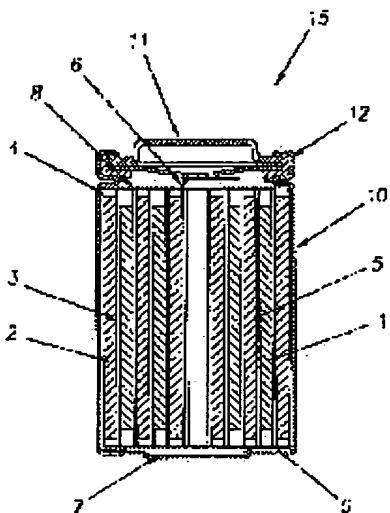


No. 9-106835

AROMATIC ADDITIVE OF POLYMERIZATION FOR OVERCHARGING PROTECTION IN NONAQUEOUS RECHARGEABLE BATTERY



Abstract:

PROBLEM TO BE SOLVED: To protect a rechargeable lithium battery from overcharging.

SOLUTION: By adding a small quantity of suitable aromatic additive to an electrolyte, a nonaqueous rechargeable lithium battery can be protected from overcharging. Such an additive increases the internal resistance of the battery by the electrochemical polymerization process with abnormally high voltage, to thereby protect the battery. To a certain kind of lithium ion batteries, an aromatic additive such as biphenyl, 3-chlorothiophene and furan is

suitable especially. Such an additive is unnecessary at the temp. higher than an applicable temp. and no polymerization is preferable thereto.